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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/201,530	11/30/1998	DONALD F. GORDON	533/173	1669

26291 7590 01/05/2004

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EXAMINER	
KOENIG, ANDREW Y	

ART UNIT	PAPER NUMBER
2611	18

DATE MAILED: 01/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/201,530	GORDON ET AL.	
	Examiner	Art Unit	
	Andrew Y Koenig	2611	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19 and 23-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19 and 23-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 16 October 2003 have been fully considered but they are not persuasive.

Regarding claims 1-3 and 9-10, the applicant argues that Liu, Asamizuya, and Russo fail to teach in combination the limitation of "wherein the storage device stores the storage bitstream at the same time that the transmission system transmits the broadcast bitstream." as amended in claim 1. The examiner disagrees; Liu is used to teach this limitation in its entirety. Even the applicant admits that "the Liu reference merely discloses that the host processor may ... (iii) copy the encoded video bitstream to the mass storage device and transmit the encoded video bitstream to the transmitter." The applicant further addresses that Liu fails to teach "at the same time." Whereas the examiner agrees that Liu does not explicitly disclose "at the same time," the examiner notes that this is inherent. Liu explicitly discloses, "Host processor 116 may copy the encoded video bitstream to mass storage device 120 for future playback and/or transmit the encoded video bitstream to transmitter 118 for real-time transmission to a remote receiver (not shown in fig. 1)." Using the "and," the Liu at least teaches copy the encoded video bitstream to the mass storage device and transmit the encoded video bitstream to the transmitter, as admitted by the applicant. Logically, if the system transmits the signal in real-time and the signal must be stored in real-time, the examiner contends that the system performs the step of storing and transmitting at the same time (i.e., contemporaneously).

Regarding claims 4, 11, 16-18, the applicant argues that Asamizuya, Liu, Russo, and Lee fail to teach "wherein the storage bitstream contains play and trick play bitstreams" in combination with "the storage device stores the storage bitstream at the same time that the transmission system transmits the broadcast bitstream. The examiner disagrees, the combination of Asamizuya, Liu, and Russo teach storing and transmitting bitstreams at the same time, as recited in claims 1 and 9. Consequently, the proposed modification is Lee, which teaches a bitstream having play and trick play functionality. Accordingly, the combination of Asamizuya, Liu, Russo, and Lee teaches the claimed limitations.

Regarding claims 5-8 and 12-14, the applicant argues that the references fail to teach at the same time, the examiner disagrees; the discussion of the argument has been addressed above (in the discussion of claims 1-3 and 9-10).

2. Applicant's arguments, see pg. 18, last paragraph – pg. 19, second paragraph, filed 16 October 2003, with respect to the rejection(s)of claim(s) 19, 23-27 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of U.S. Patent 6,084,636 to Sugahara et al.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-3, and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,314,576 to Asamizuya et al. in view of U.S. Patent 5,970,233 to Liu et al. and U.S. Patent 5,701,383 to Russo et al.

Regarding claim 1, Asamizuya teaches encoding a video frame sequence to form a storage bitstream (col. 9, ll. 2-19), which is stored then is archive storage (col. 10, ll. 41-48). Asamizuya teaches transmitting the video stream to subscribers (col. 10, ll. 41-48).

Asamizuya is silent on teaching the claimed broadcast encoder and transmitting the bitstream at the same time as storing the bitstream.

Liu teaches encoding video frame sequences to form a broadcast stream and storing and transmitting the encoded data (col. 3, ll. 36-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Asamizuya by encoding a video frame sequence as and transmitting and storing the encoded data as taught by Liu in order to compress the data and consequently making efficient use of the bandwidth while storing and transmitting at the same time.

Asamizuya is silent on teaching switching from decoding a storage bitstream to a broadcast bit stream.

Russo teaches switching from the storage bitstream to the broadcast bit stream, where a time-shifted version of the program is transmitted and is fast forwarded until it

"catches up" with the broadcasted program (col. 3, ll. 31-38), clearly Russo has some form of an indicator in order to recognize that the streams should be switched.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Asamizuya by switching from decoding a storage bitstream to a broadcast bit stream as taught by Russo in order to permit the user to view the time-shifted portion of a program and upon a request fast forward up to the current broadcast, thereby enabling real-time viewing of the broadcasted information.

Regarding claim 2, Asamizuya teaches encoding video and video inherently is a high data rate bit stream, accordingly a video encoder is inherently a high data rate encoder in order to encode and compress the high data rate of the video signal.

Regarding claim 3, Asamizuya teaches encoding video from film stock or Video Tape Recorder (VTR), whereas one of ordinary skill recognizes that the frame sequence is not necessarily real time in film stock or a VTR. Official Notice is taken that a real-time video frame sequence is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Asamizuya by implementing a VTR or video stock outputting a real-time video frame sequence in order to compress the video in real-time thus enabling the viewing of live programs and uncompressed programs.

Regarding claim 9, Asamizuya teaches encoding a video frame sequence to form a storage bitstream (col. 9, ll. 2-19), which is stored then is archive storage (col. 10, ll. 41-48). Asamizuya teaches transmitting the video stream to subscribers (col. 10, ll. 41-48).

Asamizuya is silent on teaching the claimed broadcast encoder and transmitting the bitstream at the same time as storing the bitstream.

Liu teaches encoding video frame sequences to form a broadcast stream and storing and transmitting the encoded data (col. 3, ll. 36-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Asamizuya by encoding a video frame sequence as and transmitting and storing the encoded data as taught by Liu in order to compress the data and consequently making efficient use of the bandwidth while storing and transmitting at the same time.

Asamizuya teaches encoding video from film stock or Video Tape Recorder (VTR), whereas one of ordinary skill recognizes that the frame sequence is not necessarily real time in film stock or a VTR. Official Notice is taken that a real-time video frame sequence is well known in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Asamizuya by implementing a VTR or video stock outputting a real-time video frame sequence in order to compress the video in real-time thus enabling the viewing of live programs and uncompressed programs.

Asamizuya teaches storing a previous program in order to transmit the program to the subscriber upon request (Abstract).

Asamizuya is silent on teaching switching from decoding a storage bitstream to a broadcast bit stream.

Russo teaches switching from the storage bitstream to the broadcast bit stream, where a time-shifted version of the program is transmitted and is fast forwarded until it "catches up" with the broadcasted program (col. 3, ll. 31-38), clearly Russo has some form of an indicator in order to recognize that the streams should be switched.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Asamizuya by switching from decoding a storage bitstream to a broadcast bit stream as taught by Russo in order to permit the user to view the time-shifted portion of a program and upon a request fast forward up to the current broadcast, thereby enabling real-time viewing of the broadcasted information.

Regarding claim 10, the limitations of claim 10 have been addressed in the discussion of claim 2.

5. Claims 4, 11, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,314,576 to Asamizuya et al., U.S. Patent 5,970,233 to Liu et al., and U.S. Patent 5,701,383 to Russo et al. in view of U.S. Patent 5,771,335 to Lee.

Regarding claim 4, Asamizuya and Liu are silent on teaching trick play bitstreams. Lee teaches a video on demand system with fast forward and reverse functions, which equate to trick play bitstreams (Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Asamizuya and Liu by using trick play bitstreams as taught by Lee in order to provide more functionality.

Regarding claim 11, see discussion of claim 4.

Regarding claim 16, Asamizuya teaches recalling bitstreams from a storage device as requested by a subscriber terminal (Abstract). Asamizuya is silent on addressing the requested bitstream to the requesting subscriber.

Lee teaches receiving data as per the user's request (col. 2, ll. 29-36), which clearly addresses the bitstream to the appropriate user in order to efficiently and effectively send data over the network.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Asamizuya by addressing bitstreams to users as taught by Lee in order to provide services to the user.

Asamizuya teaches transmitting the video stream to subscribers (col. 10, ll. 41-48).

Regarding claim 17, Asamizuya teaches a play bitstream, but Asamizuya and Liu are silent on teaching fast forward and fast reverse. Lee teaches both fast forward and fast reverse bitstreams (Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Asamizuya and Liu by using fast forward and fast reverse bitstreams as taught by Lee in order to provide more control and functionality to the user thereby increasing the viewers enjoyment.

Regarding claim 18, the combination of Asamizuya, Liu, and Russo, teaches the limitation of switching from the fast forward bitstream to the broadcasting bitstream upon

reaching the indicator is taught by Russo in that Russo teaches fast forwarding until the program catches up with the incoming program (col. 3, ll. 31-38).

6. Claims 5-8 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,314,576 to Asamizuya et al., U.S. Patent 5,970,233 to Liu et al., and U.S. Patent 5,701,383 to Russo et al. in view of PCT WO 96/13121 to McLaren.

Regarding claims 5, and 12-14, Asamizuya and Liu teach encoders, however, they are silent on the specifics of the encoders.

McLaren teaches an encoder (fig. 4, lab. 100), which creates a standard play video frame sequence (fig. 4, lab. 101). McLaren teaches a frame subsampler (fig. 4, lab. 55, 65, and 75). McLaren teaches an encoder for producing a fast forward frame sequence and a reverse sequence (fig. 4, lab. 120,130, and 140); it should be understood that each of the encoders provide video at different rates (as determined by the subsampling) in order to provide trick play functions, such as fast forward and fast reverse (Abstract; see also pg. 13, ll. 15-18). McLaren teaches a controller (fig. 4, lab. 90).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Asamizuya and Liu by implementing the encoder of McLaren in order to provide trick play features and enabling the user to navigate through programs more efficiently.

Regarding claim 6, Asamizuya teaches encoding MPEG data (col. 8, ll. 35-40), which inherently much code frames of video.

Regarding claim 7, Asamizuya and Liu are silent on encoding subsample frames of the video.

McLaren teaches subsampling frames and encoding (fig. 4, lab. 55, 65, and 75). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Asamizuya and Liu by encoding a subsample of video frames as taught by McLaren in order to facilitate fast forward and fast reverse using frames thereby enabling the user to gain more functionality and control.

Regarding claim 8, Asamizuya and Liu are silent on multiplexing frames to the subsampled frames. Clearly, both Asamizuya and Liu have controllers.

McLaren teaches a controller and subsampling the frames to apply a subsample of frames to an encoder, and applying a subsampling of a different rate to a third encoder (fig. 4).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Asamizuya and Liu by subsampling the frames for the second and third encoders as taught by McLaren in order to encode frames at different rates and to support additional features to the user.

7. Claims 19 and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,314,576 to Asamizuya et al. in view of U.S. Patent 6,084,636 to Sugahara et al. and U.S. Patent 5,701,383 to Russo et al.

8. Regarding claims 19, 23-25, and 27, Asamizuya teaches encoding a video frame sequence to form a storage bitstream (col. 9, ll. 2-19), which is stored then is archive

storage (col. 10, ll. 41-48). Asamizuya teaches transmitting the video stream to subscribers (col. 10, ll. 41-48).

Asamizuya is silent on teaching the claimed second for encoding the broadcast video and transmitting the bitstream at the same time as storing the bitstream.

Sugahara teaches real-time contemporaneous first and second encoders for encoding a video signal (fig. 1, col. 5, ll. 30-58).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Asamizuya by encoding a video frame sequence and transmitting and storing the encoded data with separate encoders as taught by Sugahara in order to store high quality video while reducing the bandwidth for transmission, thereby efficiently using the bandwidth.

Asamizuya is silent on teaching switching from decoding a storage bitstream to a broadcast bit stream.

Russo teaches switching from the storage bitstream to the broadcast bit stream, where a time-shifted version of the program is transmitted and is fast-forwarded until it "catches up" with the broadcasted program (col. 3, ll. 31-38), clearly Russo has some form of an indicator in order to recognize that the streams should be switched.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Asamizuya by switching from decoding a storage bitstream to a broadcast bit stream as taught by Russo in order to permit the user to view the time-shifted portion of a program and upon a request fast forward up to the current broadcast, thereby enabling real-time viewing of the broadcasted information.

9. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,314,576 to Asamizuya et al., U.S. Patent 6,084,636 to Sugahara et al., and U.S. Patent 5,701,383 to Russo et al. in view of U.S. Patent 5,771,335 to Lee.

Regarding claim 26, Asamizuya teaches a play bitstream, but Asamizuya and Sugahara are silent on teaching fast forward and fast reverse. Lee teaches both fast forward and fast reverse bitstreams (Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Asamizuya and Sugahara by using fast forward and fast reverse as taught by Lee in order to enable the viewer to control the display thereby providing a more interactive environment and more flexibility to the user.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Y Koenig whose telephone number is (703) 306-0399. The examiner can normally be reached on M-Th (7:30 - 6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on (703) 305-4380. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

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